

**U.S. Environmental Protection Agency**  
**Revised Assessment of the Potential Effects of Large-Scale Mining Development on Water Quality and Fisheries in the Nushagak and Kvichak Watersheds, Bristol Bay, Alaska**  
**Overview Summary of Comments**

Of the 5,209 on-time comment letters posted by the docket, a total of 130 letters were substantively unique comments discussing the U.S. Environmental Protection Agency's (EPA's) *Revised Assessment of the Potential Effects of Large-Scale Mining Development on Water Quality and Fisheries in the Nushagak and Kvichak Watersheds, Bristol Bay, Alaska* (the Assessment). The remaining comments were submitted by private citizens, either as individual letters, or as modified letters from mass mailing campaigns. In addition to the 5,209 comment letters, a total of 41 on-time mass mailing and petition letter campaigns were identified by the docket, totaling 520,918 public comments, with over 357,000 of them from campaigns in support of EPA action. In addition, there appears to be a Facebook campaign, totaling 138 comments. Of particular note is a creative campaign that offers the opportunity to win a trip for two to Crystal Creek Lodge in Bristol Bay for those who provide a comment, or tell a friend and "take a stand for Alaska's greatest fish and wildlife habitat" sponsored by Trout Unlimited.

This document provides an overview of the comments received, followed by a brief summary of the main points raised by commenter categories. This overview summary complements a summary table of the 130 comments (Table 1, attached) listing the agencies submitting each comment. In Table 1, commenters requesting a docket extension are indicated with a '+', those requesting the docket not be extended are represented with a '-'. In addition, Table 2 (attached) provides a brief overview of the mass mailing campaigns, their sponsoring organizations, whether or not they are supportive of EPA action, and the number of comments received for each campaign, as specified by the Docket.

**INTRODUCTION – COMMENT OVERVIEW**

**The Assessment**

The comments posted by the Docket reflect a wide variety of viewpoints both supportive and critical of the Assessment. The vast majority of comments support the conclusions of the Assessment and note that the science demonstrates that a large-scale hardrock mine in the Bristol Bay Watershed would jeopardize an important functioning ecosystem. Some commenters applaud EPA's efforts to address the comments submitted on the 2012 Assessment, while others feel EPA failed to address comments from the 2012 Assessment. Some commenters continue to find the Assessment deficient and believe large-scale mining can occur in the Bristol Bay Watershed without significantly damaging the existing salmon population.

Many of the comments supportive of the Assessment fully endorse its findings. However, some commenters who endorse its general findings also feel the Assessment continues to underestimate the risk and impacts associated with large-scale mining. Some of these commenters note that the Assessment did not adequately address the full impact of the project,

including construction of a pipeline, electricity production, and construction of a port. Some of these commenters feel that secondary impacts as well as impacts from potential future mines should be given greater emphasis.

In contrast, some commenters find the Assessment deficient and criticize it for considering the potential impacts of a hypothetical mine scenario, rather than a proposed mine plan. Some commenters suggest that by being based on a hypothetical mine, the Assessment does not rely on current practices and ignores existing standards and regulatory requirements for the design of tailings dams, waste rock piles, water management plans, road and culvert design, pipelines, and mine closure activities. These comments suggest that the Assessment should be consistent with current practice and regulatory requirements. These commenters note that modern mining practices are less environmentally damaging, and thus the Assessment overstates potential impacts. These commenters note that the mine permitting process would also require avoidance, minimization, and mitigation of impacts, and commenters request that this process and the potential benefits from mitigation measures be reflected in the Assessment.

Commenters also request that EPA make available the ‘response to comments’ on the 2012 Assessment to clearly identify what was addressed and any significant changes to the document.

## **Effects of Mining**

Commenters wrote extensively about the impacts a mine could have on the Bristol Bay region and the ecosystem. Commenters recognize that Bristol Bay Native communities depend on the salmon fishery for their subsistence lifestyle, but some commenters note that this region is economically depressed. Comments also discuss the extensive tourism industry and thriving commercial fishery that are supported by the Bristol Bay region and salmon fishery.

The dependence of the commercial salmon fishery on Bristol Bay salmon is emphasized in many comments. Commenters note that this fishery provides significant economic activity and employment and is a sustainably-managed industry that could continue to operate into perpetuity. Commenters contend that the quality of farm-raised salmon populations in no way compares to that of wild salmon. Commenters suggest that this industry and thus the salmon need to be protected from the impacts of mining. Commenters also identify the importance of the pristine ecosystem for recreational activities such as sport fishing, rafting, camping, and the tourism industry supported by these activities.

The potential effects of a mine on Bristol Bay Native communities and cultures are raised in numerous comment letters. Commenters theorize that bringing mining and additional development in the area will fundamentally change the lifestyle and culture of the current residents. Commenters write that Bristol Bay Natives are part of a culture that dates back nearly 4000 years and that this heritage should be respected and maintained for future generations. Comment letters also describe the importance of salmon as part of the cultural identity of these communities and note that Bristol Bay watershed communities depend on the salmon fishery and other wildlife as subsistence food sources. Commenters suggest that allowing mining in this area could jeopardize the salmon food source these communities rely on and also damage native cultures.

Commenters supportive of allowing mining to proceed emphasize that environmentally-responsible mining will not endanger the salmon fishery, allowing mining and commercial fishing to coexist. Commenters also note that villages in the Bristol Bay watershed are economically depressed with few employment opportunities, and are experiencing declining populations. These commenters suggest that allowing a mine in the Bristol Bay watershed could provide great benefit to these communities by offering employment as well as other mine-supportive economic opportunities.

### **Clean Water Act Section 404(c)**

The majority of commenters mention Section 404(c) of the Clean Water Act. The vast majority of commenters feel that EPA should “proactively” protect this ecosystem and should pursue an advance 404(c) veto prior to any applications for an actual proposed mine. Others suggest that EPA should defer any decision regarding use of its Section 404(c) authority until a Section 404 permit application for a specific mine project has been submitted and is under review, otherwise they view it as “pre-emptive” 404(c) action and over-reaching of EPA. A few commenters either do not address 404(c) directly or ask that EPA not pursue a 404(c) action at all, as development should be allowed to proceed.

Commenters requesting that EPA not pursue a “pre-emptive” 404(c) action recommend that a mine project be allowed to go through the permitting process – an already established process under the National Environmental Policy Act (NEPA). These commenters note that by considering an actual proposed mine, rather than a hypothetical scenario, modern mining practices and mitigation measures could result in a different set of conclusions and findings, and reduce or eliminate the risk of a mine operating in this area.

A majority of commenters urge EPA to use its authority granted under Section 404(c) to protect the Bristol Bay Watershed. These commenters cite the significant risks to the fishery associated with a mine operating in a fragile ecosystem, and contend that no mitigation measures could offset the impacts of a mine operating in the area. Commenters believe the Assessment clearly expands and clarifies the significant impacts from the 2012 Assessment, and reaffirms the significant impacts a large-scale hardrock mine would have on the ecosystem and salmon fishery, supporting their thought that EPA should act to protect the area through a 404(c) veto.

Some commenters contend that the Assessment provides all the evidence needed for EPA to begin a 404(c) action and that EPA should initiate this process immediately. Other commenters encourage EPA to continue to review and finalize the Bristol Bay Assessment prior to pursuing any action under Section 404(c).

### **Other Comments**

EPA also received many comment letters expressing the view that completing the Assessment was outside of EPA’s authority and could deter investment in mineral extraction or other activities requiring a Clean Water Act (CWA) Section 404 permit. These commenters

emphasize that Alaska's mineral, oil, and gas resources are important for the State's economy and the Assessment will negatively impact investment in these activities.

Some commenters feel that EPA did not clearly identify how comments submitted on the 2012 Assessment were addressed, and cited specific instances where there has been no change in the Assessment following the comments they submitted a year ago. Some commenters request an extended public comment period, as the complexity of the Assessment could not be adequately reviewed in such a short period of time. Other commenters request that EPA not extend the public comment period and felt they had sufficient time to prepare comments.

### **Issues most Frequently Raised in Comments**

- Many commenters raise concerns that a large mine in the Bristol Bay watershed would generate a large amount of contaminated waste over the long term, which would threaten the area's salmon fishery. These commenters feel that no level of environmental review or comprehensive mitigation could eliminate the great risk associated with pursuing large-scale mining in this area.
- Commenters assert that the salmon fishery is the largest, most diverse, and sustainably-managed wild salmon fishery and supports a thriving commercial fishing industry. Because these commenters feel the Bristol Bay salmon fishery is a valuable resource, they also believe it should be protected.
- The traditional, subsistence lifestyle of many Bristol Bay residents is frequently discussed in the comments. Commenters state that this subsistence lifestyle is closely dependent upon salmon resources and a healthy environment and by protecting the watershed, these traditional ways of life could be preserved.
- Many commenters assert that the EPA Assessment establishes the value and diversity of Bristol Bay's wildlife and fishery, and accurately demonstrates that large-scale mining is a long-term risk to the area either through catastrophic failure or long-term habitat degradation.
- Commenters frequently request that EPA use its authority under Section 404(c) of the Clean Water Act to proactively protect the Bristol Bay watershed. Commenters advocating EPA action contend that the Assessment documents the value of the area and provides compelling evidence that large-scale mining would have unacceptable adverse effects on the environment, providing support for a 404(c) action.
- Many commenters support the current National Environmental Policy Act (NEPA) process, and claim the Assessment and potential actions would undermine existing regulatory processes and set a dangerous precedent for future projects, suggesting EPA wait until permit applications are submitted and an EIS is completed.
- The mine scenario presented in the assessment could not be permitted under existing state or federal law, and is flawed as it does not fully incorporate modern mining technology, environmental mitigation strategies, or current state regulatory requirements.
- The new 2013 document includes a number of new appendices, which makes it more challenging to review, in such a short period of time.

## **COMMENT SUMMARY FROM PUBLIC COMMENTS POSTED BY THE DOCKET**

### **State Government Agencies/Elected Officials/Federally-Recognized Tribal Governments/Tribal Councils**

- The majority of commenters who represent federally recognized tribal governments support the revised draft Bristol Bay Watershed Assessment, including one commenter who notes that, “ I oppose any type of man-made development, especially the proposed Pebble Mine,” and “we want to continue to preserve our traditional way of life to freely harvest our marine mammals, all freshwater fish including salmon species in the freshwater tributaries, and in the marine ecosystem habitat areas into the millennia” (H.C. Adermann, Doc. #2917).
- Several tribal councils submitted resolutions supporting the revised Assessment.
- The United Tribes of Bristol Bay (UTBB) commend EPA for upholding its trust responsibility to protect “subsistence resources and the culture that depends on them” (Matthew Newman, Doc. #5275).
- One commenter representing the Alaska State Legislature notes that, “If the USEPA, on state land, does enact preemptive authority under CWA Section 404(c), this shall raise an important state rights issue under the Alaska Statehood Compact” (Senate President Charlie Huggins, Doc. #4632).
- Another commenter is opposed to an advance 404(c) veto because “the attempted preemptive action of EPA sets a dangerous precedent that will squelch future development of Alaska’s resources and economy” (Alaska Senator Giesel, Doc. #1180).
- An Alaska State Legislature representative, who represents several districts within the Bristol Bay region approves the Assessment and “finds it to be a comprehensive document of great value to anyone wishing to understand the facts underlying the controversies surrounding large mine development in the region” (Representative Bryce Edgmon, Doc. #5058).
- Additionally, one commenter requests that EPA “post to its website the administrative record for this Assessment. Such action would be consistent with President Obama’s recent Executive Order 13462 (dated May 9, 2013), entitled “Making Open and Machine Readable the New Default for Government Information” (State Attorney General Michael C. Geraghty, Doc. #5060).

### **Local Government Agencies/Elected Officials**

- One commenter is generally in favor of the Assessment and supports “the EPA’s effort to conduct a thorough, science-based analysis of the impact that large-scale industrial mining, such as the proposed Pebble Mine, would have on the Bristol Bay watershed... The ecological resources of the Bristol Bay watershed generated nearly \$480 million in direct economic expenditures and sales, in 2009, and provided employment for over 14,000 full- and part-time workers. The Bristol Bay watershed supports the largest sockeye salmon fishery in the world, with approximately 46% of the average global abundance of wild sockeye salmon” (Seattle City Councilmember Richard Conlin, Doc. #1093).

### **Alaska Native Corporations**

- One commenter states “It is impossible for Alaska Peninsula Corporation (APC), a major stakeholder, to respond in the window now outlined by EPA, and requests an extension of the current comment period to October 31, 2013” (APC, Doc. #732).

- One commenter is opposed to EPA’s Assessment and preemptive actions to block mining in Bristol Bay stating “We write to express our grave concerns with the regulatory overreach of the Environmental Protection Agency (EPA). The revised Bristol Bay Watershed Assessment is an attempt to preemptively determine the effects of an as yet undefined potential mining project and will be used to inform future government decision. The problem with anticipatory decision such as the Bristol Bay Watershed Assessment is that it prevents the development, over time, of a project design that is responsive to the concerns identified during the regulatory process and in compliance with law and regulation, and it also prevents the development of a full record of the environmental compliance of the project” (Doyon Limited, Doc. #4323).
- One commenter includes a resolution passed to support EPA’s Assessment stating, “Nunamta Aulukestai wants to express our appreciation to the Environmental Protection Agency for gathering the science of Bristol Bay fishery and the cultural knowledge from the indigenous people who rely on this sustainable resource. Large scale extractive industries will impact the people of Bristol Bay who rely so heavily on the returning salmon each year. The board of directors of Nunamta Aulukestai adopted the attached resolution to express our support for the assessment and call upon the Environmental Protection Agency to start the process under the Clean Water Act to prohibit or restrict large scale extractive industries from putting their waste into the pristine waters, streams, rivers and wetlands in the Nushagak and Kvichak Watershed” (Nunamta Aulukestai, Doc. #4396).

#### **Industry – Mineral Extraction**

- Commenters in the Industry Mineral Extraction category are generally against the development of the Assessment and the advance 404(c) process. They contend that each individual project should go through the NEPA permitting process. By doing otherwise, “The Assessment and potential actions would undermine existing regulatory processes and set a dangerous precedent for future projects” (Coeur Alaska, Doc. #4320).
- Commenters request a breakdown of the changes made from the previous draft to develop the current draft to assist in reviewing the Draft Assessment. One commenter suggests that EPA made the review of the revised document difficult because it was “released without warning,” with a review period of only 24 business days for a 1,300-page document and “AMA reviewers could not clear their calendars for the review,” and EPA did not summarize the changes made to the revised Assessment (Alaska Miners Association, Doc. # 2910.2).
- Commenters in this category generally state that the mine scenario presented in the Assessment could not be permitted under existing state and federal law. There is no mention of avoidance, prevention or mitigation techniques. The Assessment focuses on “potential impacts” and fails “to consider that modern mining practices are designed to reduce the probability of failures of these engineered systems to some established standard of safety, and to minimize the consequences of any failure scenario...contingency planning as part of a mining operations plan, and the establishment of response systems and strategies to control quickly any release of hazardous materials at the mine site” (Northern Dynasty Minerals Ltd, Doc. #3650.4).
- Commenters state that EPA did not consider the comments of the Peer Review Panel. “EPA has ignored its own peer review guidelines and failed to provide for an open and transparent peer review process that keeps the public fully aware of the Panel’s activities. EPA has restricted access to the Panel, ignoring the need to ensure that Panel members consider a

range of perspectives, data, and analysis from a wide variety of stakeholders” (Northern Dynasty Minerals Ltd, Doc. #3650). The commenter attaches to their comment letter a review of four of the seven third-party peer review summaries. Another comment states that over half of the peer reviewers indicated that the Assessment “identified *potential* impacts, but the report would have to be followed up with a much greater level of engineering design and mitigation that could adequately represent *realistic* mine impacts” (Alaska Miners Association, Doc. #2910.2).

- There are also comments on the methodology and data used in the Draft Assessment. One commenter states that EPA ignored the comments from the University of Alaska, Anchorage academic publication which “pointed out the EPA’s methodology was flawed and gave unreliable results” (Alaska Miners Association, Doc. #2910.2). They also suggest that the data used in the Assessment are “cherry picked” and therefore conclusions are highly biased. They further state that reports used to prepare the Assessment were developed by “individuals whom admitted scientific fraud in other works,” and therefore conclude that the Assessment is also fraud (American Miners Association, Doc. #2910).
- A commenter provides a report summarizing their conclusions that EPA’s “position that mitigation for fish habitat impacts is not possible.” They state that “EPA’s position is not based in an accurate understanding of biological resources, especially salmon, in the streams surrounding their hypothetical mine development, greatly overestimates the likely mitigation obligation associated with their mine scenario, ignores the abundant opportunities for appropriate mitigation measures within the streams associated with their mine scenario, ignores the most important and beneficial off-site opportunities within larger adjacent watersheds (especially the Kvichak watershed), and utterly disregards the vast body of knowledge related to salmonid habitat rehabilitation, mitigation and enhancement and three-quarters of a century of successful track records for appropriate mitigation measures” (Northern Dynasty Minerals, Ltd, Doc. #3650.5). The detailed report highlights identified shortcomings, and EPA’s failure to recognize:
  - Water management at the wastewater treatment plant (WWTP);
  - Increasing habitat connectivity by providing fish access to existing habitat to which they are not currently connected;
  - Potential improvement of the quality of existing off-channel habitats;
  - The creation of new habitats through the development of semi-natural channels; and
  - Increasing primary productivity and overall productive capacity for fish by developing an appropriate design for their WWTP so that discharges would increase key water chemistry constituents.

The report provides a review of scientific literature of fish habitat mitigation techniques, documented efficacy of selected fish habitat mitigation techniques, case studies where these techniques have been implemented, and mitigation opportunities locations off site.

### **Industry – Commercial Fisheries**

- The majority of these comment letters appear to be in support of the Assessment and ask EPA to use the Clean Water Act to protect Bristol Bay. Some remark that the mine’s economic impacts will be short term and should not be compared to the indefinite subsistence and commercial fisheries.

- Several commenters express concern that a mine, even without accidents, will harm the fishery, noting that Bristol Bay is known for pure and clean salmon. One fisherman claims that “Introducing even ‘permitted’ levels of chemicals into the headwaters of Bristol Bay will certainly impact my ability to sell my fish at a fair price” (Anonymous, Doc. #0029).
- One letter (C. Borbridge, Doc. #5066) requests that additional information be provided on several issues:
  - the effects that heavy metals and chemicals used in the mining process have on salmon;
  - the impact that higher levels of pollutants in fish will have on the health of the local population that rely on the fish as part of their diet;
  - additional study on seismic activity in the area of the proposed mine;
  - more information on the predicted failure rates of earth dams; and
  - more study on the importance of genetic diversity of salmon

### **Industry – Tourism**

- All of the letters from the Industry Tourism category are in support of the Assessment and express their appreciation to EPA for its efforts, stating that it is important to protect natural resources and the risks associated with mining are not worth it.
- Several commenters write that a mine will negatively impact many businesses’ ability to operate and will also negatively impact native people and commercial fishermen that depend on the salmon.

### **Industry – Other**

- Opinions from this commenter category are mixed, with some comments in support of the Assessment, and others opposed to the Assessment and/or EPA action in general.
- One commenter writes in support of the Assessment: “Thank you very much for this exemplary exploration of the impacts of a proposed, consolidated mining district on a focused geographic region – in this case, the Bristol Bay area about Lake Lliamna, in southern Alaska. The jury is out on whether porphyry copper can be mined at all in a responsible way, much less a ‘sustainable’ manner. If Pebble and other mines in the cluster were proposed to the highest levels of environmental and social responsibility, then this could only mean no mining” (Weber Sustainability Consulting, Doc. #4319).
- Another supportive commenter states “Commercial and sport fishing clearly play and integral role in the economy of Pacific coast states. In order to maintain fishing and processing jobs – and the jobs supported by associated businesses like gear manufactures, shipbuilders, suppliers and other maritime businesses – we must maintain healthy, sustainable fishery resources. EPA’s Watershed Assessment provides more than enough information to conclude that large-scale mining in the Bristol Bay Watershed would pose enormous harm to the watershed’s natural resources and the economic benefits associated with those resources. Large-scale mining would inevitably result in “unacceptable adverse effects” which is the regulatory threshold for initiating action under section 404(c) of the Clean Water Act” (Environmental Entrepreneurs, Doc. #4512).
- A comment from an investment company is generally supportive of the Assessment, and expresses concern over the realization of negative impacts if large-scale mining is permitted to occur in Bristol Bay, and over the negative economic externalities related to natural resource extraction such as damage to ecosystem goods and services from land and water



pollution related to mineral extraction. The Commenter cites an April 2013 report from Trucost and the Economics of Ecosystems and Biodiversity for Business Coalition, which “has estimated the unpriced natural capital costs at US \$7.3 trillion relating to land use, water consumption, GHG [green house gas] emissions, air pollution, land and water pollution, and waste for over 1,000 global primary production and primary processing region-sectors under standard operating practices, excluding unpredictable catastrophic events. This equates to 13% of global economic output in 2009” (Trillium Asset Management, LLC , Doc. #5111).

- One commenter is opposed to the Assessment and states “The Assessment and potential 404c actions against the potential Pebble project are premature because the project has not been finalized and no permit applications have been submitted to governmental agencies. Any project, in any industry, has the right to submit its application under the law and have its actual application reviewed and either approved or denied based on its application” (First Things First Alaska Foundations, Doc. #3925).
- One commenter opposed to EPA’s preemptive action states “AGC is very concerned that any action by the EPA to validate the revised BBWA is preemptive action that will undermine the existing regulatory process and set a dangerous for development projects. This unwarranted and unprecedented action will have a stifling effect on investment across much of the US economy” (Associated General Contractors of Alaska, Doc. #4513).
- Another commenter has a similar opinion of preemptive action, which the commenter feels should not be allowed “Every project should have an opportunity to be reviewed under the existing permitting process. If the process determines a project as designed cannot protect the environment and other resources, it will not advance. The process will not permit one industry or resource to advance at the expense of another. The EPA should recognize this process just as the applicants are required to as well” (Alaska Laborers’ Local 341, Doc. #5187).

### **National Environmental NGOs**

- At this time, comments from National Environmental NGOs are very brief – i.e., one to two page letters for all except the Center for Biological Diversity (Doc. #2922), which provides a 10-page analysis of Lake Iliamna Freshwater Seals and the potential impacts from mining on this species, substantiated by over 40 references.
- All commenters praise/commend/applaud the EPA for its Assessment, which many characterize as scientific, or based in science.
- A number of commenters cite certain data/statistics from the Assessment (e.g., miles of streams impacted, proportion of the world production of sockeye salmon from Bristol Bay) to make their point against large-scale mining in general, or the Pebble Mine in particular.
- Some commenters suggest that EPA go further by:
  - Taking 404(c) action against the Pebble Mine, or mining in general (multiple commenters),
  - Broadening the scope to assess all impacts associated with large-scale mining (e.g., large-scale port, induced development), and discounting compensatory mitigation measures because they cannot offset stream and wetland losses (Kachemak Bay Conservation Society, Doc. #1118.2), and
  - Adding Iliamna Freshwater Seals as an impacted species (Center for Biological Diversity, Doc. #2922).

## Other NGOs

- Fishing and hunting organizations are generally supportive of the Assessment, commenting on the need to protect the resources for future generations.
- Examples of positive comments include: “We applaud the EPA’s assessment of the Bristol Bay Watershed related to protecting and maintaining its physical, chemical and biological integrity, native culture and other economic usage. Having just heard about the EPA’s new triple value focus of economic, social and environmental factors, we are encouraged and appreciative of the attention paid to all 3 of these goals. Even though it is not within the purview of the EPA’s set of outcomes to measure, we would personally like to add the moral and ethical element to the evaluated set, whether or not it can be measured like the other values” (Wildlife Forever Fund – Ann Kroeker, Doc. #4201).
- While generally supportive of the Assessment, one commenter suggests that it is under-estimating potential impacts, and could be taken a step further. The commenter states: “The Assessment is unduly narrow in scope. It restricts its analysis to the effects of mining on fisheries, and does not fully examine mining’s equally severe impacts on other wildlife. The Assessment does not consider the additional development that would accompany mining projects. The Assessment understates the risks of mining by failing to consider the potential for and effects of foreseeable discharges of mining waste to waters of the United States due to operator error, equipment malfunction, severe weather, earthquakes and other natural and manmade hazards and accidents” (Law Offices of Stephan C. Volker, Doc. #5061).
- One commenter provides supporting information from over 925 angling and hunting groups and businesses wishing to see Bristol Bay remain one of the planet’s premier sporting destinations (Sportsman’s Alliance for Alaska – Scot Hed, Doc. #5063).
- The only organization generally opposed to the Assessment is the Chamber of Commerce of the United States of America, which comments that the comment period is too short given the complexity and length of the Assessment. They add: “More importantly, this is an ‘extra-regulatory’ process not tied to any federal regulatory permit action as the Pebble Partnership has yet to apply for any Clean Water Act permits or enter the National Environmental Policy Act process. To complicate matters further, there was very little if any explanation and detail for what changes were made and why they were made” (Doc. #2916).

## Academia/Professional Societies

- One comment letter (Moore Geosciences, LLC, Doc. #2911.2) cites the Second External Review Draft as “rigorous and thorough” and that it “expands and clarifies” many of the concepts from the 2012 Assessment, particularly for:
  - Potential for tailings release and transport,
  - Physical and geotechnical effects of tailings spills,
  - Release from operations and post-closure sources, and
  - Climate change and future climate Effects.
- One generally supportive commenter suggests that “the 2013 Draft offers a more balanced approach than the May 2012 Draft, and cites at least nine major additions or revisions, however, it also states the 2013 version is overly conservative in estimating likely impacts” (American Fisheries Society, Doc. #3105).
- Another comment letter (Ground Truth Trekking, Doc. #3928.2) provides a “Plain English” summary of the “Mine Bankruptcy, Abandonment and Fiduciary Responsibility” claiming it was written in ‘Business Language’ and also cites several errors including:

- Mischaracterization of geological fate of the Lake Clark fault, and
- Length not being factored into the dam failure probability.

### **Private Citizen – Expert**

- Most letters write in opposition to a proposed mine while only a handful feel that the permitting process contains enough safeguards to ensure a mine can be operated responsibly and not impact the fishery.
- A few letters express disappointment that what they feel were flaws in the original Assessment were not corrected. Issues that they feel were not adequately addressed include seismic activity, tailings dam failure, and the impacts on protected wildlife species (shorebirds, migratory birds, water fowl, and beluga whales).
- Two comments offer several suggestions for technical edits to the Assessment, referencing Chapters and specific page numbers:
  - One letter (C. Mebane, Doc. #2927) discusses Chapter 8; and
  - The other (J.M. Robbins, Doc. #4199) references groundwater in Chapters 6 and 7.
- One commenter points out that the Pebble 0.25 scenario is not economically feasible. Another raises concern that freezing temperatures limiting discharge seasonally was not taken into account when estimating concentrations in wastewater.
- One commenter (K. Zamzow, Doc. #5054) asks several clarifying questions, including “A brief explanation as to why dry stack tailings is inappropriate for acid-generating material?” and “Has anyone evaluated whether warmer temperatures in streams and an increase in TDS and potentially in selenium and nitrogen could trigger algae blooms (even if phosphorus does not increase)?” This commenter also provides several comments on Ore Chemistry, Ore Processing Chemicals, the Mine Scenarios, Water Chemistry during Mine Operation, Failure Scenarios, Closure, Post-Closure Issues, and Mitigation.
- One commenter claims that the hypothetical mine could not be permitted under current law requirements and the Assessment does not have the required baseline data or mine design that is required to make a scientific evaluation.

### **Private Citizen – General**

- A large majority of private citizens feel that allowing mining (and the Pebble Mine in particular) in Bristol Bay would be detrimental to the world’s largest sockeye salmon fishery; affecting both commercial and sports fishermen. They also feel that a mine would negatively impact the area’s wildlife, pollute local rivers and streams, and have an overall damaging effect on the entire watershed.
- A few other commenters state that they are not opposed to the mine, but want it designed and implemented using the best environmental measures, to ensure protection of all plant, animal, and aquatic species and resources. These comments typically also mention the benefits of job creation from the extraction of minerals.
- A number of comments disapprove of EPA’s efforts, and are critical of federal involvement in what they consider a local issue. A handful of these comments thanked EPA for the Assessment, but feel that the analysis is premature.
- Several comments feel that that EPA is being unfair, using a hypothetical mining scenario in the Assessment before seeing plans or permit applications.

- One commenter feels that there should be more thorough studies on subsistence in both the Assessment and Pebble's EBD.
- Another letter writes that a failure of mining infrastructure could greatly disturb the functionality of the ecosystem and suggests that the mining industry develop technologies that do not significantly alter the land surface.
- One commenter is of the opinion that the timeframe used in the scenarios for large scale mining is unrealistic and that mining can essentially continue indefinitely.
- One commenter points out that in Washington State, stringent requirements for copper in stormwater are in place to protect salmon and questions if a similar standard be considered for the Pebble mine.

### **Mass Mailing Campaigns**

- As of June 30, 2013, a total of 41 unique mass mailing and petition letter campaigns had been identified by the Docket and HW as on-time, totaling over 520,000 comments.
- Most campaigns are in favor of the Assessment and either a 404(c) veto of the site in general or an advanced 404(c) veto, except for the Freedom Action letters (#1157, #1158, and #1159) which reject the Assessment and ask for a normal 404 process (3,026 comments in total).
- There are 14 petition letter campaigns, mainly from Resourceful Earth, and two identified as Earthworks, which all have similar letters and a range of signatures in support of their respective letter. The majority of these petition letter campaigns (Resourceful Earth, 160,698 signatures) oppose EPA's Assessment and call for a normal 404 process, while the Earthworks campaigns (54,099 signatures) support EPA's Assessment and call to protect the Bristol Bay Watershed.
- In addition to the mass mailer and petition letter campaigns identified by the Docket, HW identified a Facebook campaign, totaling 138 comments.